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EXAMINER	
PYZOCHA, MICHAEL J	
ART UNIT	**PAPER NUMBER**
2137	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/822,986	ELLISON ET AL.	
	Examiner	Art Unit	
	Michael Pyzocha	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-15 and 17-21 are pending.

2. Amendment filed 06/17/2005 with a request for continued examination has been received and considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13-15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldin et al (U.S. 6,094,731) further in view of Menezes et al ("Handbook of Applied Cryptography") and further in view of Chang et al (US 5724425).

As per claim 13, Waldin et al discloses a method: entering into isolated execution mode if the file does not have a corresponding digital signature chain; analyzing an integrity of the file during the isolated execution mode; and issuing the digital signature chain if the file has an acceptable file integrity during the isolated execution mode (see Waldin et al

column 6 lines 18-65) and verifying the digital signature chain of the file by determining whether the file has an acceptable file integrity, and whether each signatory providing the digital signature chain is authorized (see column 6 lines 18-65).

Waldin et al fails to disclose determining whether a digital signature chain accompanies a file to be accessed and the digital signature chain (Waldin et al discloses a hash chain).

However, Chang et al teaches determining whether a digital signature chain accompanies a file to be accessed (see column 3 lines 38-45) and Menezes et al teaches a digital signature from a hash (see page 452-454).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Chang et al's determination and Menezes et al's method of digital signature creation for the hash chain of Waldin et al's system.

Motivation to do so would have been to determine the validity of received data (see Chang et al lines 38-45) and to allow for authentication, authorization and non-repudiation of information (see Menezes et al page 22).

As per claim 14, the modified Waldin et al, Menezes et al and Chang et al system discloses precluding access to the file

if the file has unacceptable file integrity (see Waldin et al column 6 lines 18-65).

As per claim 15, the modified Waldin et al, Menezes et al and Chang et al system discloses precluding access to the file if at least one signatory of the digital signature chain is unauthorized (see Waldin et al column 6 lines 18-65).

As per claim 18, the modified Waldin et al, Menezes et al and Chang et al system discloses opening the file if the verified digital signature chain indicates acceptable file integrity (see Waldin et al column 6 lines 18-65); and refusing to open the if the verified digital signature chain indicates unacceptable file integrity (see Waldin et al column 4 lines 45-62).

5. Claims 1-5, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldin et al, further in view of Menezes et al and further in view of Garney (US 5386552).

As per claim 1, Waldin et al discloses a platform comprising: a processor (see figure 1 #9); and a memory coupled to the processor, the memory including an isolated memory area containing a file checker executable by the processor, the file checker including a file analyzer to perform a scan operation on a file to produce a scanning result and a signature generator to produce a signature chain including a digital signature having

the scanning result and a version number of the file analyzer (see column 4 lines 45-62).

Waldin et al fails to disclose the digital signature chain (Waldin et al discloses a hash chain) and a portion of the memory accessible by the processor only when the processor is operating in an isolated execution mode.

However, Menezes et al teaches a digital signature from a hash (see page 452-454) and Garney teaches the use of isolated memory (see column 2 lines 64-68 and column 3 lines 46-52).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Menezes et al's method of digital signature creation for the hash chain of Waldin et al's system and to use Garney's isolated memory to store the file checker and signature generator.

Motivation to do so would have been to allow for authentication, authorization and non-repudiation of information (see Menezes et al page 22) to allow the system to handle interrupts from different devices (see Garney column 3 lines 35-45).

As per claim 2, the modified Waldin et al, Menezes et al and Garney system disclose the scan operation by the file checker is a virus detection function (see Waldin et al column 4 lines 48-49).

As per claim 3, the modified Waldin et al, Menezes et al and Garney system disclose the incoming file is prevented from being executed if the verified digital signature chain indicated an unacceptable file integrity (see Waldin et al column 6 lines 18-65).

As per claim 4, the modified Waldin et al, Menezes et al and Garney system disclose the incoming file is accessed if the verified digital signature chain indicates acceptable file integrity (see Waldin et al column 6 lines 18-65).

As per claim 5, the modified Waldin et al, Menezes et al and Garney system disclose a first control unit coupled to both the processor and the memory (see Waldin et al column 4 lines 45-62).

As per claim 9, the modified Waldin et al, Menezes et al and Garney system disclose the file analyzer is a virus detector, an intrusion detector, or a file integrity checker (see column 4 lines 48-49).

As per claim 10, the modified Waldin et al, Menezes et al and Garney system discloses the signature generator comprises an encryptor to encrypt the scanning result using a signature key (see Menezes et al pages 452-454); and a time stamper coupled to the encryptor to timestamp the encrypted result using a time indicator, the time stamped encrypted result corresponds to the

digital signature (see Waldin et al column 4 line 63 through column 5 line 50).

As per claim 11, the modified Waldin et al, Menezes et al and Garney system discloses the time indicator is one of a calendar time and a version identifier of the scanner (see Waldin et al column 4 lines 63-67).

As per claim 12, the modified Waldin et al, Menezes et al and Garney system discloses the file is code (see Waldin et al column 3 lines 5-20).

6. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Waldin et al, Menezes et al and Garney system as applied to claim 5 above, and further in view of Swaney et al (U.S. 4,488,232).

As per claim 6, the modified Waldin et al, Menezes et al and Garney system fails to disclose a second control unit coupled to the first control unit and a token bus interface.

However Swaney et al teaches a token bus interface (see column 8 lines 9-27 where it is inherent the system with a token bus interface must have a second control unit coupled with the first control unit to allow for the output of the file via the token bus interface).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Swaney et al's

token bus interface within the modified system of Waldin et al and Menezes et al.

Motivation to do so would have been to allow for the systems to use a token bus to transfer the data (see Swaney et al column 1 lines 10-14).

As per claim 7, the modified Waldin et al, Menezes et al, and Swaney et al system discloses non-volatile memory coupled to the second control unit (see Swaney et al column 5 lines 1-13).

As per claim 8, the modified Waldin et al, Menezes et al, and Swaney et al system discloses input/output devices coupled to the second control unit (see column 8 lines 9-27).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Waldin et al, Menezes et al, and Chang et al system as applied to claim 13 above, and further in view of Hewlett-Packard Co. (EP 1030237).

As per claim 17, the modified Waldin et al and Menezes et al system fails to disclose issuing the digital signature chain with an indication that the file integrity is unacceptable if the integrity of the file is analyzed and determined to be unacceptable.

However, Hewlett-Packard Co. discloses such an indication (see column 6 lines 33-36).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Hewlett-Packard Co.'s indication in the modified Waldin et al and Menezes et al system.

Motivation to do so would have been to determine when a file is being access (see Hewlett-Packard Co column 7 lines 1-8).

8. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Waldin et al, Menezes et al, and Chang et al system as applied to claim 13 above, and further in view of Garney.

As per claim 19, the modified Waldin et al, Menezes et al, and Chang et al system discloses code for determining whether a digital signature chain accompanies a file to be accessed; entering into isolated execution mode if the file does not have a corresponding digital signature chain; analyzing an integrity of the file during the isolated execution mode; and issuing the digital signature chain if the file has an acceptable file integrity during the isolated execution mode (see Waldin et al column 6 lines 18-65) and verifying the digital signature chain of the file by determining whether the file has an acceptable file integrity, and whether each signatory providing the digital signature chain is authorized (see column 6 lines 18-65).

Waldin et al, Menezes et al, and Chang et al system fails to disclose the code being stored in a portion of the memory accessible by the processor only when the processor is operating in an isolated execution mode.

However, Garney teaches the use of isolated memory (see column 2 lines 64-68 and column 3 lines 46-52).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Garney's isolated memory to store the code for the file checker and signature generator.

Motivation to do so would have been to allow the system to handle interrupts from different devices (see Garney column 3 lines 35-45).

As per claim 20, the modified Waldin et al, Menezes et al, and Chang et al system discloses precluding access to the file if the file has unacceptable file integrity (see Waldin et al column 6 lines 18-65).

As per claim 21, the modified Waldin et al, Menezes et al, and Chang et al system discloses precluding access to the file if at least one signatory of the digital signature chain is unauthorized (see Waldin et al column 6 lines 18-65).

As per claims 22-23, the modified Waldin et al, Menezes et al, and Chang et al system discloses providing a time stamp and

version number of the code for determining whether the digital signature chain accompanies the file to be accessed (see Waldin et al column 6 lines 18-65 and figures 4 and 5).

Response to Arguments

9. Applicant's arguments filed 06/17/2005 have been fully considered but they are not persuasive. Applicant argues: in claims 13 and 19 the modified Waldin and Menezes system fails to disclose determining whether a digital signature accompanies a file to be access; entering an isolated execution mode if the file does not have a corresponding digital signature chain; analyzing an integrity of the files and issuing the digital signature if the file has an acceptable file integrity. Applicant also argues that Waldin and Menezes fail to disclose the newly added limitation of claim 19; the cited system fails to disclose a version number of the file analyzer; and HP does not teach a digital signature chain with an indication that the file integrity is unacceptable.

Regarding Applicant's argument that the modified Waldin and Menezes system fails to disclose determining whether a digital signature accompanies a file to be access, new rejection has been made and this argument is therefore moot. As per the arguments that the modified Waldin and Menezes system fails to

disclose an isolated execution mode if the file does not have a corresponding digital signature chain; analyzing an integrity of the files and issuing the digital signature if the file has an acceptable file integrity, Applicant is directed to the cited portions of Waldin particularly column 6 lines 43-48 Waldin discloses entering a scanning process when a part of the chain fails, and issuing the digital signature if the file has acceptable integrity (see also figure 4 numbers 46-49) Applicant is also directed to figure 1 where the Antivirus module 3 is isolated within the processor.

Applicant's arguments with respect to the new limitations of claim 19 are moot in view of the new grounds of rejection.

Regarding Applicant's argument that the system fails to disclose a version number of the file analyzer, the Applicant is directed to column 6 lines 31-36, lines 49-65, and Figures 4 and 5 of Waldin where a version number of an analyzer is disclosed.

Regarding Applicant's argument that HP does not teach a digital signature chain with an indication that the file integrity is unacceptable, HP is only relied upon for its teaching of indicating that something has unacceptable integrity which is applied to the signature chain of the modified Waldin and Menezes system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP

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